CLAIMS

The invention claimed is:

1. A method comprising:

a first device establishing a connection with a second device through a network according to a faulty packet network communication protocol;

the first device transmitting to the second device original voice data in original packets through the connection;

generating redundant data by replicating the original voice data; and

transmitting the redundant data to the second device.

2. The method of claim 1, wherein

the first device generates the redundant data.

3. The method of claim 2, wherein

the first device transmits at least some of the redundant data in additional packets distinct from the original packets.

4. The method of claim 2, wherein

the first device imparts at least some of the redundant data in the original packets prior to transmitting them.

5. The method of claim 1, further comprising:

determining whether a replication flag is set; and

generating the redundant data only if the replication flag is set.

6. The method of claim 5, further comprising:

monitoring an error rate of transmitting; and

if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

7. The method of claim 6, further comprising:
securing additional bandwidth.

8. The method of claim 5, wherein
the first device generates the redundant data.

9. The method of claim 8, further comprising:
the first device receiving a redundancy request; and
in response to the redundancy request, setting the replication flag.

10. The method of claim 8, further comprising:
monitoring an error rate of transmitting; and
if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

11. The method of claim 8, wherein
the first device transmits the original voice data through an associated first modem, and
wherein the method further comprises:
determining a surplus bandwidth capacity of the first modem; and
setting the replication flag if the surplus bandwidth capacity is higher than a threshold.

12. The method of claim 11, further comprising:
setting a redundancy factor for generating the redundant data in accordance with the determined surplus bandwidth capacity.

13. The method of claim 11, further comprising:
inputting a size of a jitter buffer; and
setting a redundancy factor for generating the redundant data in accordance with the inputted jitter buffer size.

14. The method of claim 5, further comprising:

a retransmitting device that is part of the connection receiving a next one of the original packets, and

wherein if the replication flag is set, the retransmitting device generates next redundant data by replicating next original voice data included in the next original packet, and transmits the next redundant data to the second device.

15. The method of claim 14, wherein

the retransmitting device transmits the next redundant data in at least one additional packet distinct from the next original packet.

16. The method of claim 14, wherein

the retransmitting device imparts at least a portion of the next redundant data in a second received original packet.

17. The method of claim 14, further comprising:

monitoring an error rate of transmitting; and

if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

18. The method of claim 14, further comprising:

determining a surplus network bandwidth for transmitting the redundant data; and

setting the replication flag if the surplus network bandwidth is higher than a threshold.

19. The method of claim 18, further comprising:

setting a redundancy factor for generating the redundant data in accordance with the determined surplus network bandwidth.

20. The method of claim 18, further comprising:

inputting a size of a jitter buffer; and

setting a redundancy factor for generating the redundant data in accordance with the inputted jitter buffer size.

21. The method of claim 14 further comprising:

the retransmitting device receiving a redundancy request; and

in response to the redundancy request, setting the replication flag.

22. The method of claim 21, wherein

the redundancy request is issued from the first device.

23. The method of claim 21, wherein

the redundancy request is issued from the second device.

24. A device comprising:

means for establishing a connection with a second device through a network according to a faulty packet network communication protocol;

means for transmitting to the second device original voice data in original packets through the connection;

means for generating redundant data by replicating the original voice data; and

means for transmitting the redundant data to the second device.

25. The device of claim 24, wherein

the first device transmits at least some of the redundant data in additional packets distinct from the original packets.

26. The device of claim 24, wherein

the first device imparts at least some of the redundant data in the original packets prior to transmitting them.

27. The device of claim 24, further comprising:
means for determining whether a replication flag is set; and
means for generating the redundant data only if the replication flag is set.

28. The device of claim 27, further comprising:
means for receiving a redundancy request; and
means for setting the replication flag in response to the redundancy request.

29. The device of claim 28, further comprising:
means for securing additional bandwidth.

30. The device of claim 27, further comprising:
means for monitoring an error rate of transmitting; and
means for setting the replication flag if the error rate of transmitting is higher than a threshold rate.

31. The device of claim 27, further comprising:
an associated first modem for transmitting the original voice data;
means for determining a surplus bandwidth capacity of the first modem; and
means for setting a redundancy factor for generating the redundant data in accordance with the determined surplus bandwidth capacity.

32. The device of claim 27, further comprising:
an associated first modem for transmitting the original voice data;
means for determining a surplus bandwidth capacity of the first modem; and
means for setting the replication flag if the surplus bandwidth capacity is higher than a threshold.

33. A retransmitting device for use in a network comprising a first device and a second device and operating according to a faulty packet network communication protocol, comprising: a processor configured to:

receive from the first device original voice data in an original packet;

transmit through the connection to the second device the original packet;

determine whether a replication flag is set; and

if so, generate redundant data by replicating the original voice data, and transmit the redundant data to the second device.

34. The device of claim 33, wherein the processor is further configured to

transmit the next redundant data in at least one additional packet distinct from the next original packet.

35. The device of claim 33, wherein the processor is further configured to

impart at least a portion of the next redundant data in a second received original packet.

36. The device of claim 33, wherein the processor is further configured to

monitor an error rate of transmitting; and

if the error rate of transmitting is higher than a threshold rate, set the replication flag.

37. The device of claim 33, wherein the processor is further configured to

determine a surplus network bandwidth for transmitting the redundant data; and

set the replication flag if the surplus network bandwidth is higher than a threshold.

38. The device of claim 37, wherein the processor is further configured to

set a redundancy factor for generating the redundant data in accordance with the determined surplus network bandwidth.

39. The device of claim 30, wherein the processor is further configured to:

input a jitter buffer size; and

set a redundancy factor for generating the redundant data in accordance with the inputted jitter buffer size.

40. The device of claim 33, wherein the processor is further configured to
receive a redundancy request; and
in response to the redundancy request, set the replication flag.

41. The device of claim 31, wherein
the redundancy request is issued from the first device.

42. The device of claim 31, wherein
the redundancy request is issued from the second device.

43. An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed, result in:
a first device establishing a connection with a second device through a network according to a faulty packet network communication protocol;
the first device transmitting to the second device original voice data in original packets through the connection;
generating redundant data by replicating the original voice data; and
transmitting the redundant data to the second device.

44. The article of claim 43, wherein
the first device generates the redundant data.

45. The article of claim 43, wherein
the first device transmits at least some of the redundant data in additional packets distinct from the original packets.

46. The article of claim 44, wherein
the first device imparts at least some of the redundant data in the original packets prior to transmitting them.

47. The article of claim 43, wherein executing the instructions further results in:
determining whether a replication flag is set; and
generating the redundant data only if the replication flag is set.

48. The article of claim 47, wherein executing the instructions further results in:
monitoring an error rate of transmitting; and
if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

49. The article of claim 47, wherein
the first device generates the redundant data.

50. The article of claim 49, wherein executing the instructions further results in:
the first device receiving a redundancy request; and
in response to the redundancy request, setting the replication flag.

51. The article of claim 49, wherein executing the instructions further results in:
monitoring an error rate of transmitting; and
if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

52. The article of claim 49, wherein
the first device transmits the original voice data through an associated first modem, and
wherein executing the instructions further results in:
determining a surplus bandwidth capacity of the first modem; and
setting the replication flag if the surplus bandwidth capacity is higher than a threshold.

53. The article of claim 52, wherein executing the instructions further results in:

setting a redundancy factor for generating the redundant data in accordance with the determined surplus bandwidth capacity.

54. The article of claim 47, wherein executing the instructions further results in:

a retransmitting device that is part of the connection receiving a next one of the original packets, and

wherein if the replication flag is set, the retransmitting device generates next redundant data by replicating next original voice data included in the next original packet, and transmits the next redundant data to the second device.

55. The article of claim 54, wherein

the retransmitting device transmits the next redundant data in at least one additional packet distinct from the next original packet.

56. The article of claim 54, wherein

the retransmitting device imparts at least a portion of the next redundant data in a second received original packet.

57. The article of claim 54, wherein executing the instructions further results in:

monitoring an error rate of transmitting; and

if the error rate of transmitting is higher than a threshold rate, setting the replication flag.

58. The article of claim 54, wherein executing the instructions further results in:

determining a surplus network bandwidth for transmitting the redundant data; and

setting the replication flag if the surplus network bandwidth is higher than a threshold.

59. The article of claim 58, wherein executing the instructions further results in:

setting a redundancy factor for generating the redundant data in accordance with the determined surplus network bandwidth.

60. The article of claim 54, wherein executing the instructions further results in: the retransmitting device receiving a redundancy request; and in response to the redundancy request, setting the replication flag.

61. The article of claim 60, wherein the redundancy request is issued from the first device.

62. The article of claim 60, wherein the redundancy request is issued from the second device.